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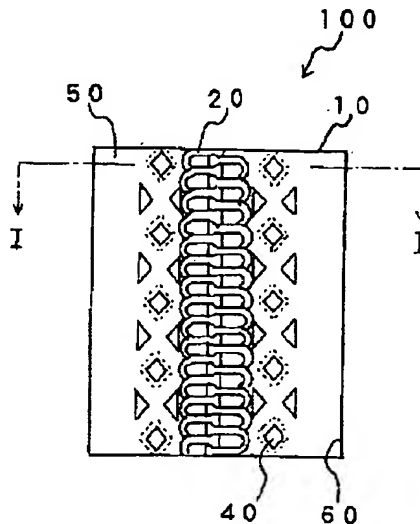
(54) **FASTENER MATERIAL**

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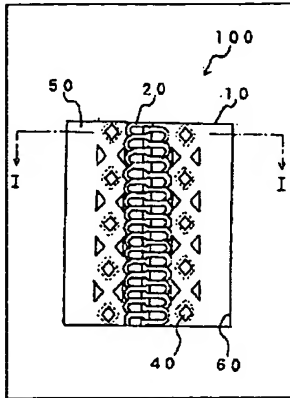
(57) Abstract:

PROBLEM TO BE SOLVED: To inexpensively provide a fastener material which exhibits the function as opening/closing means being the function of the fastener material itself and is capable of extremely efficiently executing ventilation and water permeation and improving ornamentality when used for various kinds of products having the difficulty in assuring the ventilatability and water permeability or requiring the ventilatability, water permeability, or the like.

SOLUTION: This fastener material 100 is freely attachably and detachably used by intermeshing meshing members 20 respectively fixed to the opposite ends of a pair of sheet base materials 10 with each other or disengaging these members from each other. In such a case, hot meltable blanks or blended garn materials are used for a pair of the sheet base materials 10. These sheet base materials 10 are provided with ultrasonically processed vent holes or water permeation holes formed and arranged to the state of communicating the inner side and outer side of various kinds of the products used with the fastener material 100.



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**Title:**

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CLAIMS [Claim(s)]

[Claim 1] Occlusion member of each other which fixed at the edge at which a sheet base material of a pair opposes, respectively is set to occlusion or fastener material which is made to carry out occlusion discharge and is used free [attachment and detachment]. A sheet base material of said pair consists of mixed material of a thermofusion nature material, or a this and a natural material. To a sheet base material of a parenthesis Fastener material equipped with a through tube characterized by preparing an air hole or a water flow hole by ultrasonic machining by which formation arrangement was carried out in the condition of making the inside and an outside of various products where this fastener material is used opening for free passage.

[Claim 2] Fastener material according to claim 1 characterized by having a subweb material of a sheet base material which has wrap permeability or water flow nature for a through tube on the first reverse side of any front reverse side at least.

DETAILED DESCRIPTION [Detailed Description of the Invention]

[0001]

[The technical field to which invention belongs] This invention relates to the fastener which also raises fanciness while being equipped especially with permeability and water flow nature about the fastener material used for closing motion portions, such as clothing and a bag.

[0002]

[Description of the Prior Art] Conventionally, in the fastener material used as closing motion means, such as a chuck, only functions, such as tough nature and the ease of a closing motion activity, were required, permeability and water flow nature were secured to this, and it was not observed at all about the way of thinking of moreover raising fanciness.

[0003] On the other hand, many things of which permeability and water flow nature are required exist in the product which uses fastener material. However, preparing a through tube with efficiently or sufficient appearance in the product itself has many which have the difficult property top of the product. For example, although the sweat suit which is sporting goods needs the permeability of the interior and the exterior of wear to sweating, the back who cannot open a through tube recklessly from the reasons of the exterior etc., and contains drilling shoes, the running shoes itself, and it may be still more difficult to open a through tube similarly in clothing, the common back, etc. who wear every day.

[0004] Furthermore, if a water flow hole prepares and there is also in fastener material about products which need wastewater and water flow when it gets wet in water, such as a circumference product of water, and a product used underwater, the effectiveness of wastewater and water flow will improve extremely.

[0005]

[Problem(s) to be Solved by the Invention] Then, in addition to demonstrating the function as a closing motion means which is the function of the fastener material itself, permeability and water flow nature reservation are difficult for the technical problem which is going to solve the invention in this application, or it is to offer cheaply the fastener material which uses it for the various products which need permeability, water flow nature, etc., and can carry out very efficiently [aeration or water flow], and may raise fanciness.

[0006]

[Means for Solving the Problem] A means which invention indicated by this invention claim 1 took in order to solve the above problems The occlusion member 20 of each other which

fixed at the edge at which the sheet base material 10 of a pair opposes, respectively is set to occlusion or the fastener material 100 which is made to carry out occlusion discharge and is used free [attachment and detachment]. The sheet base material 10 of said pair consists of a thermofusion nature material or mixed material. To the sheet base material 10 of a parenthesis Let the fastener material 100 equipped with a through tube 40 characterized by preparing an air hole or a water flow hole by ultrasonic machining by which formation arrangement was carried out in the condition of making the inside and an outside of various products where this fastener material 100 is used opening for free passage be that summary. That is, permeability and water flow nature are given between the insides of a product and outsides in which this fastener material 100 was attached by forming a through tube 40 in the sheet base material 10 which the occlusion member 20 fixed.

[0007] Furthermore, a means which invention indicated by this invention claim 2 took It is what is made into the fastener material 100 according to claim 1 characterized by having the subweb material 70 of the sheet base material 10 which has wrap permeability or water flow nature for a through tube 40 on the first reverse side of any front reverse side at least. By forming the subweb material 70 of permeability or water flow nature in the through tube 40 of the sheet base material 10, fine tuning of permeability and water flow nature and improvement in appearance are aimed at.

[0008]

[Embodiment of the Invention] Hereafter, this invention is explained according to the example shown in drawing 4 from drawing 1. The cross section of the fastener material 100 whose front view of the fastener material 100 which is this invention article is this invention article at drawing 2 is shown in drawing 1 .

[0009] The fastener material 100 of this example has two or more occlusion members 20 each other prepared so that occlusion or occlusion discharge might be free, and this occlusion member 20 has fixed at the end of the sheet base material 10, and it forms in right-and-left both sides the fastener material 100 with a sheet base material which has the sheet base material 10 in the condition of having carried out occlusion mutually. And by making a slide member slide along with the occlusion member 20, this occlusion member 20 is formed so that closing motion may become free, and it can enable attachment and detachment of a sheet base material on either side. In addition, as long as the sheet base material used here is the material by which melting is carried out ultrasonically, i.e., the material of thermofusion nature, in addition to this, nylon besides the textile fabrics of the chemical fiber which consists of polyester which what kind of thing is sufficient as, for example, is usually used, polyethylene, etc., and a nonwoven fabric, vinyl, artificial leather, etc. may be the mix spinning with thermofusion nature materials, such as polyester, and natural materials, such as hemp and cotton.

[0010] And an air hole 40 can open this fastener material 100 with the sheet base material 10 in the part of the sheet base material 10 with ultrasonic-machining equipment. The thing and processing edge of the type which this invention person is indicating by previous application (JP,6-6172,B or JP,3-42344,B) and with which an irradiation hole slides a processing edge top are formed in the shape of a roll, and the ultrasonic-machining equipment used at this time has the type processed when that processing edge rotates.

[0011] This example explains according to drawing 2 using the thing of the type with which an irradiation hole 210 slides the processing edge 220 top. First, this ultrasonic-machining equipment 200 has the tabular mold material 230 to which the processing edge 220 was given so that an air hole 40 might be formed in the part of the sheet base material 10, when the fastener material 100 with the sheet base material 10 which carried out point ** is laid.

Furthermore, fixed installation of the sheet fixed rectangle-like pedestal 240 is carried out to the both ends of the mold material 230, and close arrangement is carried out so that the fastener material 100 may cover these mold material 230 and the fixed pedestal 240 on it. And

according to the sheet fixed pedestal 240 top, ** arrival of the sheet presser-foot member 250 is further carried out from on the fastener material 100. The ultrasonic generator (not shown) is supported free [horizontal movement] by the stanchion horizontally prepared to the pedestal upper part, and vertical movement is also possible. And the irradiation hole 210 is formed in the lower limit section of this ultrasonic generator. This irradiation hole 210 is formed in the concave configuration 221 so that the portion of the occlusion member 20 of the fastener material 100 may not contact. In addition, in order to make it not process occlusion member 20 the very thing, a concave configuration can be prepared in the tabular mold material 230, and it can also be processed using the flat irradiation hole 210.

[0012] And when an irradiation hole 210 slides this fastener material 100 top to a longitudinal direction, the portion of the sheet base material 10 of the fastener material 100 can be melted in the configuration (configuration of an air hole) of the processing edge 220 of the mold material 230. Thus, by using ultrasonic-machining equipment 200, it can be frayed by it not only opening a hole like press decision, but fusing the surroundings of a decision hole, stop processing can also be performed to coincidence, and the further decorative effect can also be further given to an air hole 40 at coincidence by using and carrying out joining of the gold foil etc. to decision and coincidence. In addition, of course, it cannot be overemphasized that the configuration or number of air holes 40 are not asked, but are what kind of configuration or a number, a peach is good, it can choose suitably according to that use, and the configuration of this hole itself achieves a decorative effect as a part of pattern.

[0013] at this time, being formed between the portion 50 sutured by the main part of a product with which this fastener 100 is used on the sheet base material 10, and the occlusion member 20 should suture the location of an air hole 40 on the outside of an air hole 40 -- you may be any as long as it is in that condition that it can suture as a whole and permeability can be secured, although it is desirable when securing 50.

[0014] and as shown in drawing 3 , point ** of the fastener material 100 produced in this way was carried out along the edge of the closing motion part of the main part of clothing -- suture -- it is attached by carrying out sewing of 50 to clothing. It must take care so that the portion which the air hole 40 is opening may be sutured in piles with a product and an air hole 40 may not be closed at this time. In addition, joining of fastener material and the product may be carried out to an above-mentioned ultrasonic fusing production process and coincidence by ultrasonic machining instead of this suture.

[0015] Furthermore, if invention indicated by claim 2 is explained, as for this invention, a suture, adhesion, etc. will carry out the subweb material 70 which has permeability or water flow nature which covers a through tube 40 at the surface or the rear face of the sheet base material 10 of the fastener material 100 indicated by claim 1. In this case, that formation is very easy if welded using the ultrasonic generator 200 mentioned above. If the subweb material 70 at this time has permeability, such as a thing of the shape for example, of a network, and a grid-like thing, or water flow nature, it is good anything. Furthermore, if it is for the material which can be welded with an ultrasonic generator, it is much more desirable. Thereby, the decorative effect as a pattern of the through tube 40 section improves further, and even if it is the through tube 40 big [even if], it becomes possible it not only can to prevent observing the interior from the exterior by the through tube 40, but to adjust quantity of airflow and the amount of water flow with the permeability ability of the subweb material 70.

[0016] Now, since the air hole 40 is opening the fastener material 100 produced in this way to the part of the sheet base material 10, it can carry out aeration of the air of the inside of a product, and an outside, or it can let water flow now. For example, if the fastener material 100 of this invention is used for the jersey for gymnastics, a trainer, trousers, etc. as shown in drawing 5 , the air which wore the moisture which is easy to collect between the body and clothing can be emitted to the exterior. Even when it is difficult like the fastener material of

the thorax in a woman, or trousers to usually open in public, since it can fully carry out aeration even if it does not open clothing, especially such an air hole 40 can offer comfortable clothing. moreover, the product used underwater -- for example, -- hanging -- etc. -- also in the shoes for underwater used, if there is a water flow hole, shortly after coming from the water, water can be discharged.

[0017] Furthermore, since it can also have a decorative effect if ultrasonic-machining equipment 200 is used as point ** was carried out, it can also consider that air hole 40 the very thing is also a part of decorative effect, and can be made the fastener material 100 with an air hole 40 which does not have sense of incongruity in appearance. On the contrary, since it is the usual means to form covering 60 to show air hole 40 the very thing from appearance as the fastener material 100 upper surfaces are covered at one side like the fastener material of appearance top trousers also in the conventional fastener material, not using the means of a wrap for an air hole 40, ** can also hide an air hole 40 anew. Moreover, although it becomes unnatural as clothing to cover the portion with another cloth anew for example, when an air hole 40 is formed in clothing itself, since it is the general gestalt used from the former even if it forms covering 60 in the fastener material upper surface, there is no sense of incongruity, and the air hole 40 can also be covered. Thus, giving a ventilation function to the fastener material 100 can demonstrate the aeration effect to show an air hole 40 as appearance, without being conspicuous rather than it prepares a hole in clothing.

[0018] Fastener material with effective air hole and water flow hole can be offered now by suturing, pasting up and welding the web material 70 furthermore indicated by claim 2 to hide a through tube in such a decorative effect and reverse.

[0019]

[Effect of the Invention] As mentioned above, the fastener material according to claim 1 concerning this invention The sheet base material of a pair consists of mixed material of a thermofusion nature material, or a this and a natural material. "to the sheet base material of a parenthesis By having the feature the air hole or water flow hole by ultrasonic machining by which formation arrangement was carried out being prepared in the condition of making the inside and the outside of various products where this fastener material is used opening for free passage", and having prepared the air hole in this way A ventilation function can be added to the fastener material which had only the closing motion function conventionally, and the various products of comfortable clothing and comfortable others can be offered. moreover -- at the same time it can also give a decorative effect by preparing an air hole with ultrasonic-machining equipment at the time of ** -- being frayed -- a stop -- processing -- the activity is very easy. Furthermore, since hiding fastener material from the former with covering is also performed to usual, even if it prepares covering in the air hole of fastener material anew, it can hide without sense of incongruity and the clothing which was functionally excellent also in appearance can be offered cheaply.

[0020] It also becomes possible for the fastener material furthermore indicated by claim 2 to have the feature "to have prepared the subweb material of a sheet base material which equipped the first page of any front reverse side with wrap permeability or water flow nature for the through tube at least", and to be able to demonstrate a concealment-effect etc. to the further decorative effect and reverse in addition to the above-mentioned effect, and to adjust quantity of airflow and the amount of water flow by the subweb material.